



U.S. DEPARTMENT OF
ENERGY

Resolution of the Hanford Tank Farm Vapor Issues

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Building
Mission Success

Integration of Management Systems

Background

- **Strong odors (vapors) emanate from Hanford Tanks (particularly during start-up)**
- **Longstanding issue (>20 years)**
- **Chemical content of tanks never fully characterized**
 - *>15,000 potential compounds in tanks*
- **Ammonia concentration used as limit**

Issues

- **Several workers claimed health effects from vapors**
- **Workers lost faith in methods being used to ensure they were adequately protected**
- **Management had no good answers to worker concerns**

Results

- All work in tank farms required forced air respirator protection
- Injury rate rose sharply due to ergonomic issues with forced air
- Relationship between management and workforce deteriorated
- Significant media coverage
- Numerous assessments, audits and investigations ensued

Response

- **Fully integrated Action Plan led from the Office of the President and implemented in the field**
- **Worker led team established to integrate actions of other teams, keep President's Office apprised of progress and ensure that the actions taken and their subsequent implementation adequately resolved worker concerns**
- **Integrated safety team established to address increase in injuries associated with forced air respiratory protection**
 - *safety professionals*
 - *workers*
 - *union*
 - *line management*

Response

- **Integrated technical team established to address characterization and monitoring issues**
 - *in house technical expertise*
 - *line management*
 - *academia*
 - *worker reps*
 - *NIOSH*
 - *GAP*
 - *client*

Response

- **Integrated communication team established to ensure all interested parties issues were addressed and actions taken were accurately communicated**
 - *union*
 - *workers*
 - *GAP*
 - *local client*
 - *DOE HQ*
 - *media*
 - *NIOSH*
 - *Congress*

Outcome

- Injury rates lowest since electronic recordkeeping started
- Fully characterized hazard for first time in 60 year history of facility
- Controls appropriate for the hazard
 - *voluntary respiratory protection allowed*
- Improved relations and trust among workforce, management and outside interest groups resulting in significantly improved productivity